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The Unissued Philatelic Essays of Morocco, Featuring Herpetofaunal Species

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Morocco, in northern Africa, has had a turbulent recent political history, with several colonial powers struggling to acquire the country—France, Spain, Great Britain and Germany. Although the Kingdom of Morocco was established in 1956, the first stamps for the region were issued between 1956 and 1957 (separately by the northern and southern zones), and issues for the entire country commenced from 1958. Historically, both France and Spain have influenced its philatelic production. Overprinted Gibraltar stamps were used at British postal agencies tasked with postal delivery in Morocco, between 1898 and 1903. Thereafter, stamps of Great Britain, surcharged with British, Spanish and French currencies, were used till the time of Morocco’s independence. A brief philatelic history of the country can be found in Lamb (2014).

Morocco is one of few countries or postal authorities worldwide not to have issued definitive or commemorative stamps on herpetological themes (Domfil, 1992), although stamps, especially private post issues, are in high demand (Brunström, 2014).

Thus, it was a surprise when a French dealer could provide me with a set of stamp essays from this country, depicting three species of herpetofauna, from a series of 10 species depicting mostly African species of mammals and reptiles (Table 1). This includes the now locally extinct north African crocodile (*Crocodylus suchus*), the Mediterranean tortoise (*Testudo graeca*) and

the exotic (to North Africa) rhinoceros viper (*Bitis nasicornis*). All (except apparently one, the giraffe, *Giraffa camelopardalis*) were prepared with alternative color frames, and of the same value, suggestive of early designs (= philatelic essays; *sensu* Mackay, 2003) for approval. Not much is known of the date of issue or designer, except that they date to the year 1956 and are printed on ivory cream paper type. The crocodile proofs are of 3 franc denominations, and set in frames of gray, green and brown, and printed on map litho paper stock, each measuring 132 × 100 mm, each of the stamps of dimensions 48 × 27 mm. The higher value tortoise proofs are in denomination of 20 franc (fr), and set in frames of gray and green, and in similar size and type of mount. The highest values in the series are the snake stamp designs, of 45 fr value.

Other taxa in the series include the extinct (since before 1500) giraffe (*Giraffa camelopardalis*) (2 fr, set in brown frame), the Barbary stag (*Cervus elaphus barbarus*), an antelope (15 fr, set in gray frame) and an exotic species, the hamadryas baboon (*Papio hamadryas*) (5 fr, set in gray frame).

The design of the set is worthy of description. Format is either horizontal (eight designs) or vertical (two designs). The frames measure 8 × 5 mm, the space for the images 28 × 18 mm. On the top are the words “MAROC POSTES” (= Morocco Post, in French). On the left of the frame is the proposed value in

Table 1. Essays for an unissued series of thematic stamps from Morocco, featuring mostly African fauna.

Sl	Proposed face value (in francs)	Species depicted	Frame color / format	Remarks
1	2 fr	Giraffe, <i>Giraffa camelopardalis</i>	brown / horizontal	Extinct in Morocco
2	3 fr	North African crocodile, <i>Crocodylus suchus</i>	brown, green and gray / horizontal	Extinct in Morocco
3	5 fr	Hamadryas baboon, <i>Papio hamadryas</i>	brown, green and gray / horizontal	Exotic to Morocco
4	10 fr	Barbary sheep, <i>Ammotragus lervia</i>	brown, green and gray / horizontal	Mountains of Morocco
5	15 fr	Barbary stag, <i>Cervus elaphus barbarus</i>	gray / horizontal	Extinct in Morocco
6	20 fr	North African tortoise, <i>Testudo graeca</i>	brown, green and gray / horizontal	Widespread in Morocco
7	25 fr	Bactrian camel, <i>Camelus bactrianus</i>	brown, green and gray / horizontal	Exotic to Morocco
8	30 fr	Sand cat, <i>Felis margarita</i>	brown, green and gray / vertical	Western Morocco
9	40 fr	Tibetan fox, <i>Vulpes ferrilata</i>	brown, green and gray / horizontal	Exotic to Morocco
10	45 fr	Rhinoceros viper, <i>Bitis nasicornis</i>	brown, green and red / vertical	Exotic to Morocco



Figure 1. Unissued philatelic essay from Morocco, of suggested 3 franc value, showing *Crocodylus suchus*. Design includes versions with gray, green and brown frames.

francs, in French, on the right, the value in Arabic numerals, the currency cited in Arabic script. Above and below the values are hieroglyphic-like motifs, which may be space fillers for these essays. At the bottom of the frame is indication of postal authority (Al-Maghrab Bareed) in Arabic script, the Arabic name of the postal department of Morocco at the time of French occupation.

Since stamps issued from Morocco between 2 March 1956 and 20 November 1957 were from the northern zone (under Spanish rule, denominations in centimos and pesetas) and the southern zone (under France, denomination in centimes and francs), the essays under review are evidently from the French postal service. The French currency persisted after the unification of the two postal services, in late 1957, with the introduction of dirham and cent.

Further support for a French origin comes in the reference to the intended country of origin of these essays. Stamps issued from the northern zone bear “Marruecos”, while those from the southern zone show “Maroc Postes” (see Maetz, 2015). The words “Royaume du Maroc” of contemporary Morocco stamps appear for the first time on a three-value stamp issue from 1958 (Stanley Gibbons catalog number SG 57-59), that commemorate the inauguration of the headquarters of UNESCO in Paris. More recent philatelic issues from Morocco have been technically innovative, such as the 3.25 dirham, 100% recycled postal stamp, issued to commemorate the 40th Anniversary of the World Earth Day (Jennings, 2010).

Reasons for non-issue of the Moroccan philatelic essays are

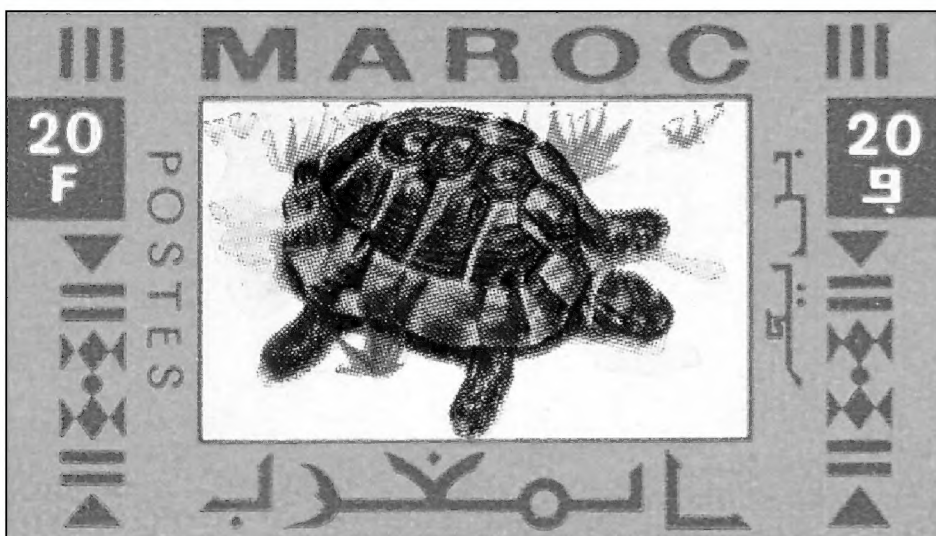


Figure 2. Unissued philatelic essay from Morocco, of suggested 20 franc value, showing *Testudo graeca*. Design includes versions with gray, green and brown frames.

worthy of speculation. Chief amongst them is that this North African Kingdom became independent in the presumed year of design of these philatelic essays, adopting its own currency and appointing its own security printers. Additionally, North African nations, in general, have preferred non-thematic stamps, few issuing herpetofaunal topics (the turtle, in particular, being *haram*, or unlawful meat for followers of Islam). Starting from 1956, Morocco has issued no less than 1,273 philatelic issues till July 2010 (as enumerated by Stanley Gibbons catalogues, and supplemented by the Gibbons Stamp Monthly, issue of February 2012), relatively few of which are on zoological themes (except large mammals, birds, and fishes). Other reasons may be the realization that a majority of the species to be depicted do not (or no longer) occur in Morocco, or the rather poor design of the series, with excessively wide and bright frames that detract from the images themselves.

These stamp designs have been suspected by the selling source, to date to March 1956, predating the independence of Morocco in January 1962, when the new currency, the dirham, was adopted. At the time of independence, Morocco used a number of European printers for the design of its stamps: Courvoisier in Switzerland, Enschede in the Netherlands, Delrieu in France, and Heraclio Fournier in Switzerland. Of these, the most likely designer may be either Heraclio Fournier or Courvoisier, part of whose archives were dispersed via auction in recent years (Läge, 2007; Zimmermann, 2007; Morgan, 2008).

This article presented a case of unissued zoological series of philatelic essays from the Kingdom of Morocco, dating back to the year 1956, about the time of independence of the country. The essays are in French currency, and were never issued. Three herpetological species are recognizable, one extant, one extinct and one exotic to the country.

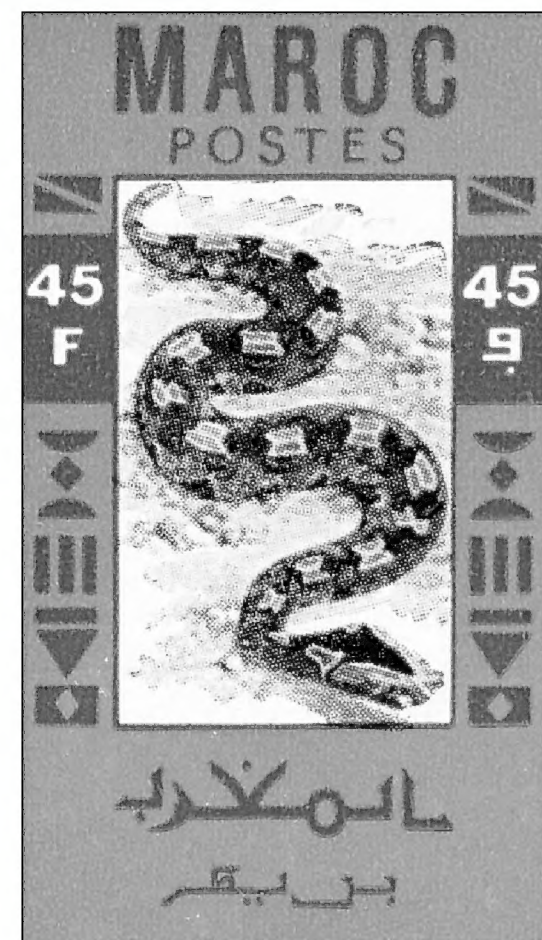


Figure 3. Unissued philatelic essay from Morocco, of suggested 45 franc value, showing *Bitis nasicornis*. Design includes versions with red, green and brown frames.

Acknowledgments

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Notes on the Herpetofauna of Western Mexico 13: Effects of Wildfires on the Reptile Community in the Natural Protected Area “La Primavera,” in Jalisco, Mexico

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Abstract

We surveyed the herpetofauna at four sites affected by wildfires that occurred on different dates in the natural protected area “La Primavera,” with the purpose of identifying the differences in the community structure among the four sample sites at different stages in the recovery process. We sampled a total of 1.2 hectares per site, distributed in 6 band transects and compared the richness, abundance and diversity. The sample sites affected by wildfires have high diversity, richness and evenness values. The sample sites with greater recovery time after the wildfire have the lowest values. This project is very important because the high number of wildfires in the natural protected area each year and the meager information about the effects of fire on the fauna.

Resumen

Se realizó el muestreo de reptiles en 4 sitios afectados por los incendios forestales ocurridos en diferentes fechas dentro del área de protección de flora y fauna bosque La Primavera, con la finalidad de conocer las diferencias en la estructura de la comunidad de reptiles en cada uno de los sitios en recuperación a través de un gradiente de perturbación. Se muestrearon 1.2 hectáreas por sitio mediante 6 transectos en banda y posteriormente se realizó el análisis de riqueza, abundancia y diversidad. El sitio recientemente afectado resultó con el valor de diversidad más alto, la mayor riqueza y la mayor equidad, mientras los dos sitios con un mayor tiempo de recuperación obtuvieron los valores más bajos. Este estudio resulta relevante debido a la gran cantidad de incendios que se presentan en esta área natural protegida y a la poca información respecto al efecto que estos tienen sobre la fauna.

Introduction

Wildfires occur naturally and cyclically in ecosystems and provide benefits to the environment, such as the germination of certain seeds, and consumption of dead matter, allowing for nutrients to be recycled into the environment. On the other hand, these events can have severe consequences to the environment depending on the intensity and frequency with which they occur.

Fires are an important element in determining the structure and function of many ecosystems worldwide. They may influence α and β diversity of organisms in differing ways depending on the extent of the burned patches (Pastro et al., 2011). Many studies have investigated various effects of fires upon fauna. Examples are: genetics (Schrey et al., 2011a, b), ecology (McCoy et al., 2013; Bernstein and Christiansen, 2011).

Species with limited mobility capacity are more likely to die from wildfires (Lyon et al., 2000). In contrast some species of reptiles may be favored by wildfires; especially those that prefer open areas, because after the fires, sites possess little vegetation cover (Greenberg et al., 1994; Brisson et al., 2003).

The most severe problems are experienced by the species that need specific habitat requirements or very specific food. The relative densities of such species decrease after fires (Pianka, 1996).

Wildfires have been a major problem at this protected area “La Primavera” (*Área de Protección de Flora y Fauna La Primavera* or APFFLP) (CONANP, 2000). Cane crops cover large areas near APFFLP and are considered the main cause of fires due to their management, including pre- and post-harvest burning. Due to its proximity to the city of Guadalajara the area is increasingly subjected to pressure from the impacts of urbanization, agriculture and other anthropogenic factors.

Although it is obvious that forest fires alter the structure of forests and communities of organisms living there, in Mexico, few studies have been conducted to find out precisely how wildfires affect the natural communities. This paper seeks to highlight the structure of reptile communities that have been affected by the fires.

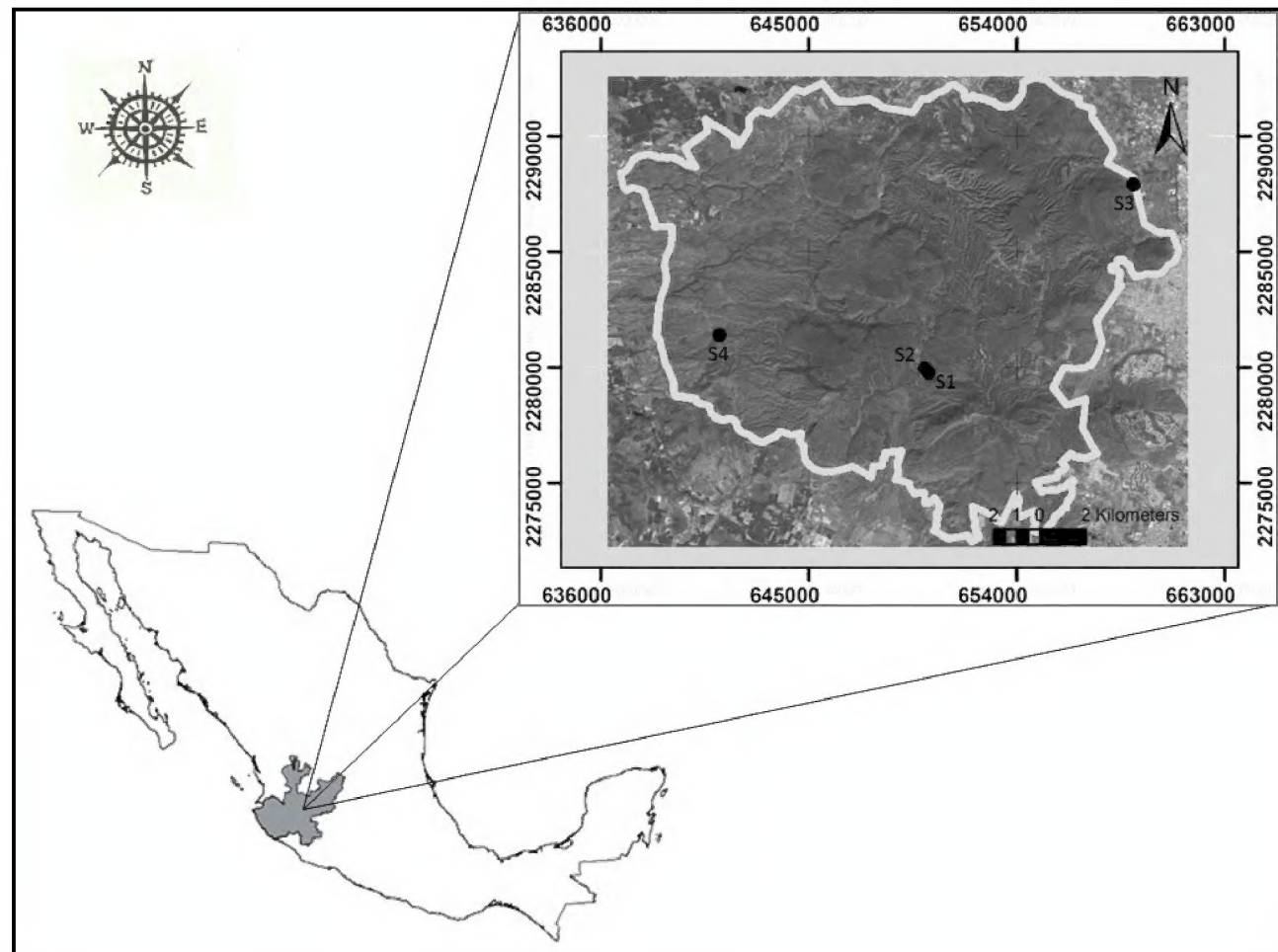
Methods

Study area: The APFFLP is located in the central part of the state of Jalisco, 103°28' to 103°42' W longitude, and 20°32' to 20°44' N latitude. It has an area of 30,500 hectares, and lies within three municipalities: Zapopan, Tala and Tlajomulco de Zúñiga, with Zapopan most of the area (SEMARNAT, 2010).

The sierra “La Primavera” is part of the Neovolcanic Transversal. This mountain range originated quite recently in geologi-

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cal terms, with volcanic eruptions occurring between 140,000 and 27,000 years ago.

According to the modified Köppen classification for Mexico (García, 1988), the climate in the APFFLP is represented by two types: humid and semi-warm temperate subhumid. Rainfall occurs both in summer and winter. The annual rainfall ranges from 800 to 1000 mm. The average annual temperature is 20.6°C with a variance of 6.5°C. January is the coldest month and the warmest is June. The average annual humidity is 63% (CONANP, 2000; SEMARNAT, 2010).

In APFFLP there are four vegetation types according to the classification of Rzedowski (1978) these are: oak forest, oak-pine forest, pine forest and tropical deciduous forest. Three plant communities are mentioned in the APFFLP management plan: riparian, rock-inhabiting and ruderal (CONANP, 2000).

According to CONANP (2000) there are 200 species of vertebrates reported, of which two are amphibians and 17 reptiles. Of these 200 species, 19 are under some form of protection by Mexican environmental law (SEMARNAT, 2010). More recently Reyna-Bustos et al. (2007) recorded 56 species of herpetofauna.

We used a chronosequence model; that's why four sites were chosen for sampling. Sites that were affected by the fires at different times should be at different stages of recovery, thus representing a gradient. The four sites were chosen based on information about past fires in APFFLP. Below is a brief description of the sampling sites:

Pine-Oak Forest (Site 1): This site was affected by a fire before 1998 (the exact date of the last fire is not known); however this site harbors a pine-oak vegetation type; in some transects pine is dominant forest. The site is located at coordinates: UTM 0650027 2279961, 1846 masl.

Oak-Pine Forest (Site 2): This place underwent a fire in 1998. The vegetation is oak-pine. The site is located at coordinates:

UTM 650204 2279756, 1871 masl.

Open Oak-Pine Forest (Site 3): This site had a fire in 2002. The vegetation is oak-pine forest. The site is located at coordinates: UTM 0659047 2287923, 1633 masl.

Recently disturbed Pine Forest (Site 4): This site suffered a fire in 2005. The vegetation is pine-oak. The site is located at coordinates: UTM 0641138 2281407, 1466 masl.

Sampling was done every month for a year from February 2006 to January 2007. Sites were sampled daily for four consecutive days depending if weather conditions were similar. These samples were made through in-band transects (Fitch, 1992; Sutherland, 2000) which had a length of 200 m and a width of 10 m. We used six transects per site adding to a total surface of 1.2 hectares sampled per site. We registered all herpetological specimens per band transect. To update species names we used the most recent literature: Flores-Villela and Canseco-Marquez (2004) and Liner and Casas-Andreu (2008).



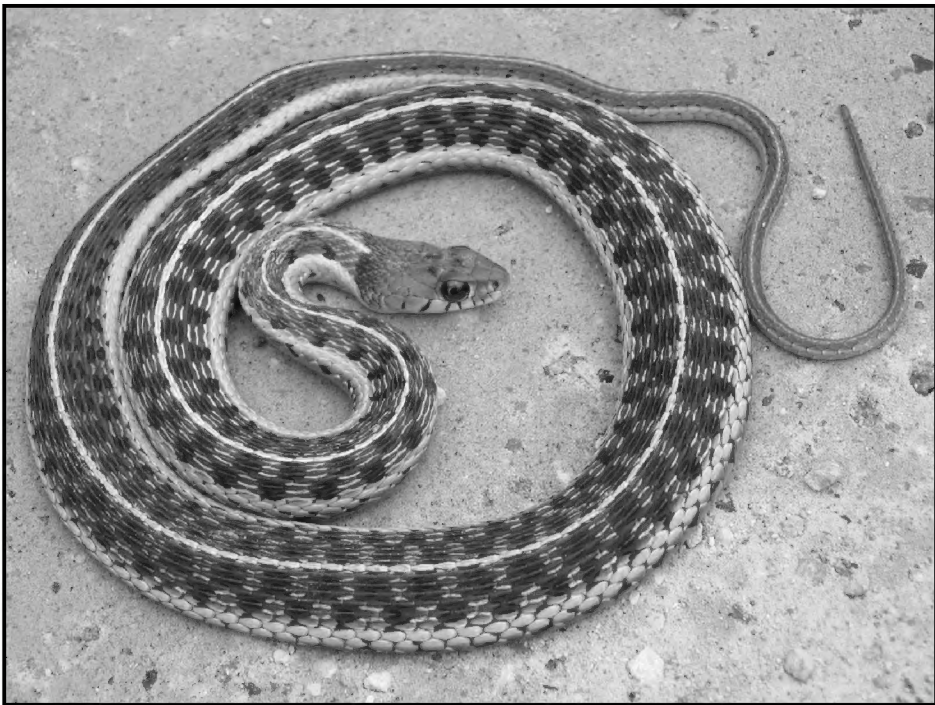
An oak forest in recovery after a forest fire. Photograph by Daniel Cruz-Sáenz.



An *Elgaria kingii* moving through the leaf litter of a pine forest. Photograph by Daniel Cruz-Sáenz.



An *Anolis nebulosus* on an oak tree. Photograph by Daniel Cruz-Sáenz.



A beautiful *Thamnophis cyrtopsis*, a species known to inhabit the area, but not found in the study. Photograph by Daniel Cruz-Sáenz.



A male *Sceloporus scalaris* atop the leaf litter after eating a prey item. Photograph by Daniel Cruz-Sáenz.



A Pacific Coast parrot snake, *Leptophis diplotropis*. Photograph by Daniel Jimeno Sevilla.



Bocourt's black-headed snake, *Tantilla bocourti*. Photograph by Daniel Cruz-Sáenz.

Table 1. Species present in each site forest fire date, values of richness, diversity and evenness for each of the sites.

	Site 1	Site 2	Site 3	Site 4
Date of forest fire	before 1998	1998	2001	2005
<i>Anolis nebulosus</i>	238	246	123	27
<i>Elgaria kingii</i>	0	2	0	0
<i>Aspidocelis communis</i>	0	0	0	8
<i>Plestiodon indubitus</i>	14	41	0	0
<i>Urosaurus bicarinatus</i>	0	0	0	2
<i>Sceloporus horridus</i>	4	1	15	25
<i>Sceloporus scalaris</i>	0	0	0	1
<i>Coluber mentovarius</i>	0	0	1	0
<i>Leptophis diplotropis</i>	0	0	0	1
<i>Tantilla bocourti</i>	1	1	0	0
Richness	4	5	3	6
Diversity	0.137	0.213	0.167	0.534
Evenness	0.228	0.305	0.350	0.686

The sampling methods allowed us to directly detect as many species as possible that were present at the moment (Campbell and Christman, 1982; James, 1994). Intensive search was conducted on each band transect, i.e., we looked under rocks, logs, in leaf litter, on trees and wherever feasible to find the reptiles. To analyze the community structure we used species richness (Shannon Index) and relative abundance. Shannon's diversity index was used to measure the diversity between sites. Evenness was also calculated. The analysis was run in the software PAST.

Results

Surveys were conducted between February 2006 and January 2007 we found 751 individuals representing six families, nine genera and 10 species (Table 1). Of the observed species, five are under special protection in the NOM-059-SEMARNAT-2010 and three are endemic to Mexico (SEMARNAT, 2010).

The families Phrynosomatidae and Colubridae were each represented by three species; the other four species were in four separate families (Table 1).

Anolis nebulosus and *Sceloporus horridus* were found in all sampling sites; however abundances in sites with a longer time of recovery (1 and 2) are slightly lower than in the more recently affected sites (3 and 4). Six species were recorded in only one site each: *Aspidocelis communis*, *Elgaria kingii*, *Sceloporus scalaris*, *Urosaurus bicarinatus*, *Coluber mentovarius* and *Leptophis diplotropis*.

Elgaria kingii, *Plestiodon indubitus* and *Tantilla bocourti*, were present on sites with a longer recovery time. These species generally prefer places with a high concentration of leaf litter. *Sceloporus scalaris* and *Aspidocelis communis*, species that prefer open areas, were recorded only in the recently disturbed pine forest.

Of the 751 records obtained during the study most were *Anolis nebulosus* with a total of 634. However, *A. nebulosus* was much less abundant in the recently disturbed pine forest than at the sites that had been recovering longer. On the contrary, *Sceloporus horridus* was much more abundant in the more recently burned sites. The two most abundant species other than *A. nebulosus* were *P. indubitus* and *S. horridus*. Three species were found only once: *S. scalaris*, *L. diplotropis* and *C. mentovarius*.

Discussion

Two lizard species that prefer open areas, *S. scalaris* and *A. communis*, were found only in the recently disturbed area of pine forest. Greenberg et al. (1994) and Brisson et al. (2003) found in recently disturbed sites (with newly sprouted herbaceous species) species that prefer open areas increase their populations.

Most species are affected by fires. Species differences are apparent between the sites most recently affected by the fires and the recovered sites. This is due to habitat modification especially for arboreal species and those living in leaf litter and fallen logs.

Although *A. nebulosus* was the dominant species at all sites, its abundance was reduced in newly disturbed sites. By contrast *S. horridus* was favored by the disturbance, being more abundant in recently disturbed sites.

In the case of *P. indubitus* and *T. bocourti* a pattern is seen that is similar to that described by Pianka (1996), in which species with very specific habitat requirements decrease their populations after a disturbance. These two species were found at sites with substantial litter coverage and were not present in recently burned sites.

There is a marked difference between the numbers of species reported by Reyna-Bustos et al. (2007) for the forest "La Primavera" with those found in this study. This reflects two things: the size of the sampled area and the effect of fire on the decline in species richness, because all sites studied were affected by wildfires previously. And the richness in the burned areas is also lower in relation the rest of the natural protected area.

It is important to conduct long-term studies on the effects of forest fires on fauna because the frequency of this phenomenon increases over time due to factors such as mismanagement of agricultural crops.

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Book Review: *Bushmaster: Raymond Ditmars and the Hunt for the World's Largest Viper*

by Dan Eatherley. 2015. 303 pp.

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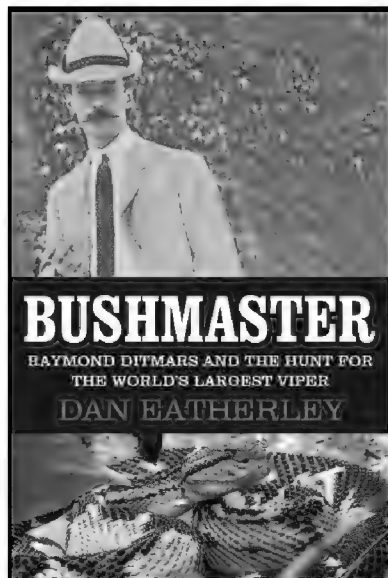
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Raymond Ditmars is an icon of North American herpetology. Ditmars was the first curator of reptiles at the Bronx Zoo, serving from 1899 until his death in 1942. More importantly, he was passionate about sharing his knowledge of and love for reptiles with the public through a series of books, lectures, and pioneering nature documentaries in the new medium of motion pictures. For those of us who grew up in pre-internet times, Ditmars' *Reptiles of the World* and *Snakes of the World*—while long out of date even then—often were the only books about herpetology in local libraries to feed the passions of the next generation of reptile-smitten students. Many herpetologists who followed in Ditmars' footsteps cite his books as instrumental in fostering their love of herpetology.



Of all the reptiles he worked with, Ditmars was perhaps most obsessed with the bushmaster, *Lachesis muta*. Of course today three additional species are recognized, *L. acrochorda*, *L. melanocephala* and *L. stenophrys*. Ditmars held a fascination for bushmasters ever since he received his first one in a shipment from Trinidad in 1896. He received a small number of them over his years at the zoo, but unfortunately they rarely survived very long due to rough handling during capture and heavy parasite loads. The arrival of a bushmaster at the zoo or Ditmars' departure on an adventure in search of them always was big news in local papers. Ditmars made many trips to the American tropics in search of bushmasters, but never saw one himself in the wild. The bushmaster was Ditmars' white whale. His passion for the species came across in his writings, which, along with his iconic photograph of the head of a bushmaster with open mouth, erect fangs, and slanted, malevolent eyes, sparked interest in the species among Ditmars' many fans and followers. I'm sure many of you remember that remarkable image. If not, you can see it in Eatherley's book.

Bushmasters remain the favorite and most sought after prize for many herpetologists, both professional and amateur. Bushmasters are the longest viper in the new world, reaching lengths of 2.5 m (8.25 ft) with a record length of 3.65 m (12 ft). They have peculiar bead- or file-like scales along their dorsum, and a spine-like scale on the tail tip. Bushmasters are the only New World vipers that lay eggs. They are scarce, secretive, and rarely encountered in the wild. When a lucky herper does find a bushmaster, it invariably becomes the highlight of his trip and the thing most bragged about. Even the well-known herpetologist

Harry Greene, in his seminal book *Snakes: The Evolution of Mystery in Nature*, devoted his introduction to the bushmaster. Greene reminisced about being in elementary school and reading Ditmars' adventure of unpacking that first feisty bushmaster from its shipping crate and struggling to transfer it to a cage in his family's home. Of all the many experiences in his varied career, Greene came back to Ditmars' inspiration and his own fulfillment of the quest to work with bushmasters as perhaps his greatest career highlight to illustrate the fascination of snakes.

Dan Eatherly's new book, *Bushmaster: Raymond Ditmars and the Hunt for the World's Largest Viper*, is more a biography of Ditmars than a study of the bushmaster. Eatherly began with a degree in zoology and employment with first the BBC and later an independent production company in the UK as assistant producer of nature documentaries. He produced two films for National Geographic starring Rom Whitaker: *Snake Hunter North America* and *Snake Hunter Costa Rica*. During the filming of the latter a bushmaster was briefly shown, and Eatherly was captivated. He began research on a proposed new documentary about bushmasters, which led him directly into Ditmars' remarkable life and career. Unfortunately, the events of 9/11 changed the focus of networks away from animal documentaries and his project was shelved, but Eatherly was caught in the same spell that so many other budding herpetologists had fallen for: the charisma of Ditmars.

Eatherly uses three tools to tell Ditmars' story. First, he employs historical fiction, in which he writes a scene from Ditmars' life like a novel, with detailed descriptions of locations, persons, and events, including dialogue. Each story is based on an actual event, but the novelization approach genuinely brings the story to life, allowing the reader to become immersed in the event and imagine what it might have been like to be there.

The second writing tool Eatherly uses is simple description of facts and events in Ditmars' life, as might be done in any biography. For instance, the original reptile house at the Bronx Zoo was the world's largest at 146 feet long and 100 feet wide, and construction cost was \$50,000, a considerable sum in 1899. Ditmar's initial salary as assistant reptile curator was \$75 per month plus \$10 room allowance. The reptile food bill for 1901 included "389 mice, 1,410 rats, 1,273 English sparrows, 366 rabbits, 531 pigeons, 232 chickens, 812 toads, 408 frogs, 26,900 live fish, 55 lbs. earthworms, 18,000 mealworms, 122 large pumpkins, 2,266 lbs green vegetables." But more than just data, Eatherly relates stories about the zoo and also Ditmars' travels. Because specialized veterinary care was unavailable, Ditmars was forced to do his own doctoring, relying on initiative, common sense, and a knowledge of normal behavior and anatomy. He kept a supply of medical equipment in his office, and medi-

cal procedures and outcomes usually were reported in the local newspapers. Ditmars knew the popularity of large and dangerous specimens and prioritized them, working with a network of dealers, collectors, and explorers to keep a constant supply of new arrivals. This often led to more adventures, such as the time two large king cobras escaped from their containers at the premises of a New York animal importer and Ditmars and an assistant had to rush over to capture them. Ditmars traveled to the countryside around New York City by means of railroad and horse cart, and later by motorcar, to collect local snakes. He once got in trouble in the press for carrying a 14-foot king cobra on a train from New York to the National Zoo in Washington, D.C., in his own berth to keep it warm. In spite of his claims of using an escape-proof container, it was felt he had placed the public in unnecessary danger. In later years Ditmars traveled extensively to Central and South America and the Caribbean to collect animals for the zoo. His departures and target species, as well as his returns and results, made popular headlines in both local papers and national magazines like *Time*.

Finally, Eatherly follows in Ditmars' footsteps himself, and, seeking the help of knowledgeable people, tries to experience some of the same activities that Ditmars pioneered and perfected. He hunts snakes in Central Park and some of the few remaining rattlesnake dens in New York and Connecticut. He visits Ditmar's house, which of course has a new owner unaware of its history, and also the reptile house of the Bronx Zoo. He interviews herpetologists currently doing the same work done by Ditmars. He visits the Cape Fear Serpentarium in Wilmington, North Carolina, which is run by Dean Ripa, the father of captive bushmasters. Ripa has the largest collection of bushmasters in the world and perhaps more experience with the genus than anyone. Ripa's specimens live long lives and breed regularly. I've had the privilege of a personal tour of Ripa's collection and it is most impressive, not to be missed.

Eatherly finally visits Trinidad where several of Ditmar's first bushmasters originated, shipped to him by R. R. Mole, a local collector, and where Ditmars himself visited in 1934 to procure animals for the zoo—specifically a bushmaster. This part of the narrative was of considerable interest to me because Eatherly's host in Trinidad was none other than the past editor of the CHS *Bulletin*, John Murphy, who is working on an update of his 1997 *Amphibians and Reptiles of Trinidad and Tobago*. I was one of several CHS members who joined Murphy in Trinidad in 1993 to gather specimens and photographs of the local herps for that book. We saw a wide variety of very interesting and exotic reptiles and amphibians there, but in spite of searching known haunts, the closest we came to seeing a bushmaster was a piece of dried skin on the wall of the Simla Research Station left there by its founder, William Beebe. Ditmars had a similar experience on Trinidad: he failed to find a bushmaster

himself but was given one collected by others. I'll leave it to you to read Eatherly's own experiences and adventures on the island.

Eatherly weaves the three writing styles together to good effect, moving from historical fiction to biographical narrative to personal experience and interviews and back again. The result is a story that is interesting, cohesive, and holds one's attention.

The book contains a number of black-and-white photographs of Ditmars, his colleagues, and his days at the Bronx Zoo. It is interesting to see the zoo animals from times when there were no restrictions on which species could be imported; Ditmars is shown with a Komodo dragon, unpacking a shipment containing a recently collected Galápagos tortoise, and with a "consignment" of Galápagos land iguanas. An image of the old Bronx Zoo reptile house is a stark contrast to modern zoo reptile houses. Additionally a number of contemporary color photographs depict Eatherly's travels and experiences doing research for the book.

Ditmars had a remarkable career. He recognized that people viewed reptiles in general and snakes in particular with both awe and revulsion, and thus strove to educate and identify positives about his favorite animals. To that end Ditmars was a master of promotion, both of herpetology and himself. He was a popular author of nature adventure books and much in demand as a lecturer. He was a master of generating news headlines in both local and national publications, concerning new animals and exhibits at the zoo as well as proposed travels and acquisitions. Even before his first significant motion picture was completed in 1914, he was described as "the father of cinematographic zoology." One of his many documentaries was titled *Evolution* and utilized a rhinoceros iguana with miniature backgrounds to depict a dinosaur. The film was re-released in 1925 to capitalize on the publicity of the Scopes "Monkey Trial" in which a high school teacher was prosecuted for teaching evolution in Tennessee. Ditmars also was deeply involved in the development of an effective treatment for snakebite in spite of never having been bitten himself. He collaborated with researchers in the United States, Brazil, and Panama who were working to develop an effective antivenin, and milked venomous snakes from the zoo to provide raw material for its production. Ditmars also publicized and condemned ineffective folk treatments for snakebite. In addition to serving as curator of reptiles, he was awarded a dual appointment as curator of mammals, and at the end of his career he initiated a public exhibit of invertebrates. Perhaps most importantly, he inspired generations of herpetologists who followed in his footsteps.

Bushmasters are perhaps as remarkable as members of the snake family as Ditmars is to the herpetology family. The two are forever linked, and their story is both interesting and entertaining. Eatherly does a good job of sharing that story and bringing it to life, and I recommend this book.

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Herping for Snow Snakes in Southern Arizona

Roger A. Repp

The urge to just thrust the reader right into the thick of the following adventure without any explanation is strong. But a few things need to be explained first, as many readers of the *Bulletin* may be unfamiliar with the field herping techniques here in Arizona. Even the term “field herping” should be clarified. Many of you might call the act “field collecting,” but those who are in my circle of friends seldom collect a wild herp for any purpose. In Arizona, we have learned that if we leave them as found, there is a very high chance that we will one day encounter them again. This is especially true during the fall, winter, and early spring of each year. Many species of snakes and lizards demonstrate fidelity to their winter lairs, as do Desert Tortoises. They arrive at their winter homes in late fall, remain throughout the cold of winter and early spring, and clear out when the weather suits them. They then leave, and pursue well known (to them) migratory patterns until the following fall, when they sometimes return to the exact same structure they utilized the year previous. When one finds a herp in the fall, and leaves it undisturbed, one stands a good chance of finding that same herp year after year.

As the story that follows centers on aggregate dens of Western Diamond-backed Rattlesnakes (*Crotalus atrox*), we stick to them with further explanations as to how the field trip described below developed. Back in March of 1995, all the dens discussed were first discovered and named. They are located roughly 30 miles north of the Mexican Border, well south of the town of Robles Junction, also known as Three Points. Ron’s Den has always been the best den to ever pass before my eyes, and has had up to 21 *atrox* visible with one visit. South Wash Den has had as many as five, Roger’s Den, seven, Turner’s Den, three, 3-DPR, 13, and Fluorite Mine, 17.

Most readers are no doubt familiar with the drought conditions that have surrounded the Southwest over the past decade. Prior to the outing described below, the area we visited had not received any measureable rainfall for 175 days. Contrary to any misinformation that might be out there in literature, *all* herps living in the Sonoran Desert *must drink water* to survive. They can go a long time without, but when the opportunity to drink presents itself, they *must* take advantage of that situation.

The story that follows clearly demonstrates the effort that ectothermic creatures like rattlesnakes will go through in order to take advantage of any wet circumstances. The names of the individuals involved have been changed, in order to prevent them from meddling with my text.

On 19 March 2006, a group of nine people embarked on a herp trip. The official motif of this adventure could best be described as: What’s the sense in being stupid if you can’t prove it? The plan started six months previous to the trip actually happening. The Gartersnake Queen, Musky Missy, sent out an email that she would have a buddy in town on 19 March, and she wanted said buddy to see a bunch of herps. Missy’s email went two directions. One went to Miller Highlife, the other fell into the lap of Buttes Davis.

Since both of us do whatever Musky Missy wants, we were all sorts of anxious to oblige. Besides, something planned six months down the road is usually an event that won’t happen anyhow—or so we thought. But death and taxes are no less failing than a plan set in motion by Musky. Come March 16, when dismal weather forecasts for the appointed date began crossing Miller’s computer, he morphed into typing boy, and began to email powerful remonstrations. This in the hopes that **somebody** would come to their senses. But there was not a lick of common sense displayed by anybody for the next three days.

Hence, March 19 dawned, and five of us arrived at the lordly estate of the Musk Queen. Tucked lovingly within the cramped but friendly confines of Musky’s household were BriGuy, Suicide Sal, Hatchet Jeff, and Ms. Musky Missy herself. Upon our ingress to the household, it appeared that one helluva party had ensued the night before—one that the other five people along on this day weren’t invited to attend. The snubbed five consisted of driver #1, Mr. Nuthinbutnice, driver #2, Papa Bear, driver #3, Miller Highlife, with Bud Lite and Buttes Davis rounding out the quintet. The plan was to take a trip to some *atrox* dens in the morning, followed by an adventure into the highlands to seek Ridgenose. Since he knows all, sees all, and shares **way** too much, Miller Highlife was to be the guide for this excursion. He chose a series of killer *atrox* dens that were “en route” to the Ridgenose spot. (En route in the same fashion that Florida is en route to Mexico City.)

Normally, the local weather Jedi’s couldn’t count their nose and reach the same sum twice. But for once, they had the forecast 80% correct. Rain, sleet, snow, hail, and a daytime high of 65 degrees. Four out of five isn’t bad where our weather folk are concerned. Where they got the 65-degree part is unclear. At no point in the day did it get any warmer than 45°F.

Prior to departure, we all took turns tripping over empty beer bottles and slipping on discarded undergarments in order to utilize the facilities. Musky’s toilet got a heavy workout during this pre-road-trip urinary festival. Once all nine bladders were gladder, it became time to gather around the three chariots that were to take us to the herps.

We gazed to the southeasterly direction that we were about to go, and could not help but notice gigantic, ominous and foreboding black clouds billowing both upward and outward to smother us in their cold embrace. Even as we watched, a giant hand suddenly appeared in the sky, its index finger pointing directly at the oncoming clouds. Lightning snaked from the tip of this finger, and blasted a neat and narrow script through them. The words that issued from this fingertip were, “mene, mene, tekkel, upharsin.” We took this handwriting on the clouds as a sign that it would all blow over soon.

With the lame promise that at least 20 *atrox* would be observed this day, Miller Highlife led the caravan into the teeth of the storm. We arrived at the first stop just in time to face a hurricane. Since Miller had driven his Tacoma pickup, he had stored everything in his open bed in Glad Hefty trash bags.

These trash bags became the garb for the day for those who had not brought rain gear. In particular, Suicide Sal was wearing only shorts, a T-shirt, and sandals. He looked quite spiffy in his Man from Glad attire.

The temperature was near freezing. The winds buffeted us at 40 mph. Rain mixed with sleet came next—this all at the time when we were just getting ready to start the 200-meter hike down to a gully that contained two *atrox* dens. At that point, if any one of us had said “Screw this!” the day would have been over. Everybody was waiting for somebody else to become the voice of reason. And nobody was man or woman enough to speak their mind. Each of us was too much of a wuss to throw a wuss—despite the fact that throwing a wuss would have been a most pragmatic decision. A mutiny would have been welcomed by Captain and crew alike.

Hence, under the most impossible of conditions, nine manly wusses began picking their way through the minefield of discarded backpacks, clothing, pampers, and toothpaste left by those who went before us. Any remote spot south of I-10 these days is a Walmart of sorts. No need to buy anything, just pick it off the ground. While en route to the first den, Bud Lite decided to “shop” for a new backpack. While exploring the inner recesses of one of his selections, he discovered two empty cans of jalapeño peppers. Yup—good old jalapeño peppers—the perfect survival fare. Don’t they offer these northbound Southrons any travel tips before they embark on their journey? Goodness gracious, there had to be more hard, fast dribbling going on here than at the NCAA basketball tournament!

Speaking of desperate people, the nine of us eventually arrived in front of a south-facing limestone mini bluff. Miller Highlife informed the group that they were standing before the den known as Roger’s Den. All nine people hit the den with everything they had, with the results being that the den was truly as great as its name. We didn’t see a damn thing!

During the course of shining crevices and tangling with cholla pods, the weather took a turn for the better. The howling winds ceased, and the rain morphed into dime-sized snowflakes. (Figure 1). The snow was not only coming down—it was rapidly accumulating on the ground. And now, nine people were seeking the legendary “snow snakes.” It did not take us long to score one.

Miller hoofed up slope and down wash from Roger’s Den. He was heading to a place known as Turner’s Den. Discovered by a gentleman by the name of Dale Turner a few years previous, this den was everything a den should **not** be. Leave it to a lizard guy to find such a den. It is a pyramid-shaped chunk of granitic limestone caprock of sorts. It faces due north. It violates every rule that has ever been written about the hibernacula of snakes that don’t read such rules.

And speaking of violating rules, coiled in front of the east entrance to Turner’s Den was a young male *atrox*. At the point Miller made the find, snowflakes were landing on the snake’s tightly-coiled form. The snake was reacting to the accumulation by slowly and methodically directing its snout to each wet spot, and lapping it up. Yes, sirs and madams, this snake was drinking

snow melt off its body!

The group gathered to photo this animal in the act, but nobody was really able to do so successfully. The snake spooked at all the attention it was getting, and crawled very slowly into the deeper recesses of its den. One down, and 19 to go in order to meet Miller’s *ridiculous* prediction of 20.

On a normal mid-March day, we could expect temperatures of 85°F. We could have merrily explored the wash that contained Turner’s Den, and had a fighting chance at finding many more snakes. But as we were now herping in a winter wonderland, Miller was forced to make an executive decision. Said decision was to visit only the sweetest known spots in the area. This in turn set up a full-scale evacuation of the wash.

During the course of the evacuation, a Border Patrol agent paid us a courtesy call. He was a bit curious about nine people in Man from Glad attire mucking up his turf. Once he was assured that we were all harmless, and merely out of our minds, he was kind enough to inform us to be careful, that there was heavy illegal traffic in the area. No kidding! Really?

Nine people then piled into the three vehicles for the next assault. During our drive time, the storm morphed once again into gusty winds combined with rain and blistering sleet. It was under these conditions that we made preparations to assail the



Figure 1. The perfect weather for herping? Snowflakes descend on Blake Thomason (Bud Lite) and Melissa Amarello (Musky Missy). Moments after this image was taken, the first *C. atrox* was found. Photograph by Brian Freiermuth (BriGuy).

mightiest of all *atrox* dens: Ron's Den.

As mentioned earlier, Ron's Den is a gash den that has been under observation since its discovery in March 1995. The patriarch and alpha male of the den is Tyson. He's a big, strong, skinny old nasty *atrox* who rules his roost like a tyrant. He was there to greet us in 1995, and he was there to greet us again this day. He was outside the gash, sleet blasting his flanks, moving around the perimeter of the opening like it was 90 degrees outside. Incredibly, one other male was mimicking his antics. (These two snakes are like the guys who attend football games bare-chested in subzero temperatures). Three other *atrox* were coiled just outside the gash, heads in coils, lapping up sleet and rain. (Figure 2). Yet two more *atrox* were observed about 600 millimeters back in the gash, amongst the pack rat debris that is perennially visible inside.

Eight down, twelve to go . . .

As the storm continued to howl about us, Miller Highlife finally spoke his mind. "Screw the Ridgenose," said he. "We ain't going a mile high in this stuff!" Eight sighs of relief, accompanied by nodding heads, followed this announcement. (But who knows what we may have missed?).

The group then hiked their way southward, to a den that carries the name South Wash Rat Den. The sleet continued to sandblast the flesh off our bodies, to the tempo of chattering teeth and knocking knees. We plunged our way into South Wash, observing as we did an entire city of Mesquite and Palo Verde lean-tos. These were created by using trash bags, tarps, and limbs sawed and stacked. Mexico City has less recent urban development than did South Wash on this day. We figured these dwellings were part of the illegal traffic that we were supposed to be watchful for.

Miller doesn't use GPS quadrants. They are for pussies. It's **much** more fun to drag eight people through a wash whilst fretting and apologizing that the den is hard to find. Just about the time that he was ready for despair—and suffer multiple stab wounds of varying depths in the process, the familiar meter-high stack of *Neotoma* debris came into view.

Like Turner's Den, South Wash Rat Den has no business being a den at all. It violates more rules than Turner's Den, and



Figure 2. At Ron's Den, a large adult male *C. atrox* is coiled in a rain harvesting posture, drinking sleet off its flanks. Photograph by Brian Freiermuth

yet holds more *atrox* than Turner's. It is a Packrat Cholla/stick midden that stands a meter tall, by about 1.5 meters wide. The midden is packed against a steep wash cut, has multiple entrances that lead into said wash cut, and faces due north. To further defy the book of rules that snakes don't read, a towering mesquite casts shade over the site.

Here we saw two *atrox*. One was a skinny male poised on top center of the midden. The other was a female coiled on the wash bottom at the west edge of the midden. The skinny male had his snout buried in his coils, head titling downward, drinking lustily of the accumulation of sleet and rain on his flank (Figure 3). While we watched this, a smallish head appeared among the coils of this male. This head belonged to yet another female, who was rising out of the depths of the midden to join the male up top. She spooked, he spooked, the other she spooked, and all crawled slowly back into the recesses of the den. The male that had been drinking gave pause to do some courtship head-jerks on the flank of the female as they retreated together.

Eleven down, nine to go. Against impossible odds, Miller's outrageous goal of 20 was beginning to look feasible.

The group herped their way through South Wash, with one Tree Lizard (*Urosaurus ornatus*) being found under a small sheet of tin. The poor thing was as black as charcoal, and as stiff as a groom on his wedding night.

Once again, the gang of nine hopped into their respective vehicles. They were next en route to a den called 3-DPR, and another named Fluorite Mine Den. Getting to both places consisted of driving down nearly impassable, rutted roads that eventually petered out. From that point, it was a half-mile hike to get there. A new crop of storm clouds blew in, fiercer than anything we had experienced thus far. The wind was howling directly into our faces, pelting us with stinging sleet. And though the weather obliterated anything more than ten feet in front of us, we continued on. To say we did so without complaint would be a flat-out lie. By this time, we were reduced to whimpering, mewling little wussies, with no more backbone than a chocolate éclair. But nevertheless . . . we continued on. We had 20 *atrox* to find. And besides that, if the ectotherms could take it, so could we!



Figure 3. Emaciated male *C. atrox* caught in the act of spooking while trying to lap sleet off its flank, South Wash Rat Den. Photograph by Melissa Amarello

3-DPR yielded three more *atrox*—one out drinking. We explored an area known as the Beehive Den, where Bud Lite found an *atrox* in a vertical crevice, drinking seepage that was flowing down the sides of the tight chamber it was in. Fluorite Mine yielded one *atrox* in the shaft, and two more exposed and drinking. The last *atrox* was a large male, coiled well away from any shelter. The sleet was barreling down on him so hard that it was actually bouncing off his flanks. Nevertheless, wherever a wet spot remained, there went his snout. His forked black tongue would slowly lap up said water spots, before moving on to the next. By this time, the storm had reached its apex. The rain and sleet were coming down so hard and fast that we dared not take our cameras out.

Eighteen down, two to go. And then came the wuss. We would settle for the 18. By the time we got to the vehicles again, the wind had died, and once again, large snowflakes began gently descending on the landscape. While we were all cold, wet, and miserable, we all appreciated the rarity of the freak storm we were witnessing.

The group split to go their separate ways. Bud Lite and Miller Highlife had two options: go sit at a tavern, or continue onward into the snowstorm. We opted for the latter, and gooned

up five more *atrox*, a Black-tailed Rattlesnake (*Crotalus molossus*), a Western Lyresnake (*Trimorphodon lambda*), and a Western Banded Gecko (*Coleonyx variegatus*). Despite the impossible weather, the 19 March 2006 field trip yielded the very best herp totals of the entire year.

This herper always keeps the tune of the day in his head when engaged in fieldwork. Said tune is usually influenced by the surrounding conditions. A few words from the ditty of the day that I could not shake are in order here. In tribute to the eight stoic souls who joined me this day, I include a few snatches from the 1970 hit song “Ride Captain Ride” as performed by the Blues Image:

Ride, captain, ride upon your mystery ship,
Be amazed at the friends you have here on this trip
Ride, captain, ride upon your mystery ship,
On your way to a world that others might have missed

The great eight who accompanied me on this stormy day were all truly amazing. And thanks to their willingness to go along with it all, we witnessed a world that others definitely would have missed.

This here is Roger Repp, signing off from Southern Arizona, where the turtles are strong, the snakes are handsome, and the lizards are all above average.

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A less colorful, more scientific rendering of this account can be found here:

Repp, R. A., and G. W. Schuett. 2008. Western diamond-backed rattlesnakes, *Crotalus atrox* (Serpentes: Viperidae), gain water by harvesting and drinking rain, sleet, and snow. *The Southwestern Naturalist* 53(1):108-114.

For further background information on the overwintering habits of herpetofauna in Arizona:

Repp, R. A. 1998. Wintertime observations on five species of reptiles in the Tucson area: Shelter site selections / fidelity to shelter sites / notes on behavior. *Bull. Chicago Herp. Soc.* 33(3):49-56.

Unofficial Minutes of the CHS Board Meeting, June 12, 2015

President John Archer called the meeting to order at 7:32 P.M. Board members Ed Huether, Aaron LaForge, Andy Malawy, Colleen Schwarz and Mike Scott were absent.

Officers' Reports

Recording Secretary: Rachel Fessler read the minutes of the May 15 board meeting.

Treasurer: In the absence of Andy Malawy, Mike Dloogatch presented the financial report.

Membership Secretary: Mike D. read the list of memberships due to expire. The membership count continues to decline.

Committee Reports

Upcoming shows:

- Notebaert Nature Museum, first full weekend of each month.
- Raging Waves Waterpark, Yorkville, June 20.

- Rockin' for Reptiles at Midwest Museum of Natural History, Sycamore, June 27, 11 A.M.–3 P.M.
- Sheffield Garden Walk, Lincoln Park, July 18–19.
- Museum of Science and Industry Members' Night, July 22.
- Green Fair on the Fox, Batavia, August 8, 9 A.M.
- Bug Fest at Red Oak Nature Center, Batavia, August 22, 9 A.M.–2 P.M.
- UnityFest, Marquette Park, August 22, 10 A.M.–3 P.M.
- Westmont Pet Promenade, September 14, 10 A.M.–3 P.M.

Junior Herpers: There were 33 people in attendance for the June 7 Jr. Herpers meeting.

New Business

John Archer reported that we are still in need of a ReptileFest venue for the coming year; NEIU may be an option.

The meeting adjourned at 8:34 P.M.

Respectfully submitted by Rachel Fessler

What You Missed at the May Meeting

John Archer
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What is the impulse to document? Why does nearly everyone I know whip out a camera at nearly every find? Not for the fourteenth cottonmouth on Snake Road, but certainly for the first or largest, or a nice timber, or a rough greensnake sliding through the brush. I take perhaps the worst photos in the world. I celebrate when I have most of the important parts in focus. And yet, I'm prey to this impulse also. My incompetence prevents me from being a full-fledged snake paparazzo, and I will often let the more accomplished (everyone) take photos of a found subject and then beg to borrow their pictures, but I will also frequently snatch a "voucher" photo before the real pros move in. I have no Flickr or Instagram account (thankfully), and I would never put my photos on the Field Herp Forum. I will not build a photo album on my computer and certainly not a paper album. I don't give lectures, and if I did, I would borrow others' photos so the audience would not be subjected to mine. I don't know why I take them, but I know that it gives me pleasure to occasionally review even my crappy photos and remind myself of interesting times and exquisite events. All too often the pictures get moved to a hard drive or a CD and are rarely viewed again. So, why bother, and what could I do with them?

Our May speakers presented me with an answer, and if I overcome my lazy and irresponsible ways, I think I may be participating. Justin Michels and Don Becker overcame traffic jams and auto breakdowns to give us insight into what Justin has labeled "merping." I am not going to use that word, because only someone with much greater self-confidence and stronger self-image than I could tell anyone he was going merping. Seriously. We need another word. But the idea is great. Don Becker and Justin Michels are both inveterate field herpers who know their way around computers. They are dedicated to conserving herps and educating the public about them. Frequent contributors to fieldherpforum.com, they take excellent photographs. They wanted to convince us that it is important for us to participate in citizen science projects and explain a way that we could easily accomplish that.

Justin wanted to set the stage for Don's talk, so he talked about what we as individuals could contribute to herpetology and why it was important, especially in Illinois, which ranks 49th among the states in percent of land remaining in original vegetation. Range extensions and rediscoveries of protected species in new areas can allow new and critical habitat to be protected. Government organizations do not have the manpower or budgets to survey as much territory as all amateur herpers can. Most herpers document their finds, usually with photos, but



Justin Michels and Don Becker. Photograph by Dick Buchholz.

few make use of those pictures. Justin gave us specific examples of cases where a herper's observations have led to extra protection. And he reminded us that some landowners allow private individuals on their land but not anyone from government. I would hope that Justin was preaching to the choir, but it never hurts to be reminded that we can make a difference. I have less faith in the efficacy of appeals for efforts towards a cause rather than appeals to our own self-interests, so I'll present their talk a bit differently from how Justin and Don presented.

Don devised the naherp.com site associated with Scott Waters's good works but was not satisfied with all its features or limitations, so he created herpmapper.org. It's a site that will allow you to keep a life list of all your finds, including locations and other data. A photo voucher can be taken with your smart phone or downloaded from your computer, and if your camera or phone is so equipped, it will automatically record the date, time, and location. You add any notes that you wish. You have access to all the data and photos you have entered. Don't know the species? Leave that box blank. Herpmapper works with herpetologists around the world to aid in the identification. Location is critical and needs to be fairly precise. That's no problem if being downloaded from your camera or phone, but the app incorporates a map that allows you to click on the location if you need to load the location manually. You can search all of the data by various criteria, including date, time, taxon, and even location, but only down to county level if the posting is not yours. Want to know what you've found between 11 A.M. and 4 P.M.? You can do that. Want to see all the spots you recorded in Google Earth? You can do that. How many six-lined racerunners have you recorded? Easy. This site excites even a terrible photographer such as myself because it's not about the quality of the photo but the data.

So has Don put this site together to help us all keep a better life list? No. Don sees himself as a middle man, acquiring data from field herpers and supplying it to organizations and individuals doing legitimate research. Now, I know there are those of you who are super paranoid about exposing your favorite sites. If you're really paranoid, there is nothing I can say to assure you that your info is safe but I think Don convinced me that this site is as secure as humanly possible. Only the original poster and admins can see all the details of a record. Others can view locality only to the county level. The app even strips the EXIF data from your photos so no one can access that info from your posted photo. The administrators now are Don, Mike Pingleton, and Christopher E. Smith. I think those three have enough credibility in the herp world that there is no danger of them

stealing your sites. The data partners, as Don calls the primary users, are accredited organizations engaged in research, conservation and protection of herpetofauna such as Arizona Game and Fish Department and the Orianne Society. A complete list of the partners currently signed up can be found on the web site. Any of the data partners only has access to the data that is pertinent to a particular request, and every request is vetted before being approved. Data storage is designed with long-term security in mind at an IBM secure data center that includes armed guards. Secondary and tertiary back-ups exist at other locations. The data security is up-to-date and multi-layered.

Don set up this site knowing the need for extensive data collection available to the proper researchers over the long term. I can't repeat all the facts and figures that Justin and Don hit us with, but I tend to be a bit of a cynic and they convinced me that this is a valuable site. I've already posted a few of my photos

just to try it out. I didn't use the phone app because I don't have a smart phone, but the computer entry is easy and it's fun to play around with the data. This is not the only site that has similar goals, but it is the only worldwide herp-specific site that I can find. Don didn't disparage other sites. Indeed, the phone app will also post to naherp.com. If I want to post other animals or in other places there is inaturalist.org or projectnoah.org. Don encourages you to use whatever platform you like in addition to herpmapper.org. But Justin and Don convinced me that herp-mapper is a valuable addition to data collection sites, particularly for herps. While I don't consider myself a technological Luddite (there are probably people who would argue with that), even without a smart phone I can easily load photos and records to the site. And it's fun. Doing some good for the animals we all care about just got a lot easier. Check it out at herpmapper.org. Thanks, Justin and Don.

Bull. Chicago Herp. Soc. 50(7):108-109, 2015

What You Missed at the June Meeting

John Archer
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Show and tell is always a popular meeting. Seems many of us really enjoy showing off our animals. But it's hard to write up because anything I try tends to look like a list that should have numbers and bullet points. Maybe I should write it up that way some time, but not this time. This time I want to deal with philosophy a bit.

No, don't throw down your *Bulletin* in fear of having to wade through my meanderings on the meaning of life. (It's 42.) I'm not smart enough to even fake an intelligent and intelligible diatribe about any subject that requires deep thinking, but I do on occasion think, and sometimes I think about your society and why it exists. I know we have a mission statement and I know we do good work, but what does this organization really do?

It's no secret that many regional herp societies have ceased to exist and most others are struggling. I suppose there are multiple reasons, but I'm going to blame the internet. Things change and the internet certainly has changed the way we interact with one another. Perhaps we no longer feel the need to attend a meeting to get the information we need about particular animals. If you search long enough you can probably find a forum that has at least an occasional expert that will weigh in with answers to nearly any question you have. Determining who is the expert and who has the correct answer is difficult, but I don't have to call someone or wait until the next meeting to at least find an answer, and with a little effort I can probably find a correct answer. It's fast, easy, and I don't have to embarrass myself by exposing my stupidity.

So meeting attendance decreases and our membership numbers drop (gradually, but they're dropping). But one of our better-attended meetings is Show and Tell, and ReptileFest draws hundreds of volunteers for two days, many of whom will

never attend a monthly meeting. I could say that most of us just like to show off our animals, but I think the appeal of those two events goes deeper. We do many small live-animal shows throughout the year and it's often difficult to find members willing to fill slots. What is the common denominator between ReptileFest and Show and Tell that make both events popular, other than getting to talk about our animals? We get to talk to people who are truly interested. At both events the audience self-selects for interest in herps, and much of the fun in those two events is the sharing of information that one only gets through face-to-face contact. The audience and the presenters are both learning. What I don't feel most people understand is sharing happens with every speaker we have. If you're there in person you can ask questions, clarify points, and even argue with the speaker. And usually the learning continues after the meeting with more personal interactions over food and libations. I still believe that meetings and speakers are valuable, but I might find I'm wrong.

So here's what you missed at the June meeting. Colleen Schwarz showed off her first native herp, an unsettled bull snake that proclaimed its dissatisfaction with very loud hissing. A rehomed ten-year-old, Colleen named him Bullwinkle and, like many bull snakes, he appeared vicious but was all bluff. Jeremy Browning brought his seven-year-old, weighty albino Burmese python that, because of its typical docility, he often uses as an ambassador for snakes. He keeps the animal in a very large cage and is anticipating the animal's growth. Tim Jarvis showed off his "opinionated" Chinese rat snake. Tim was a little surprised when he wasn't showered with musk or even bitten. The beautiful snake behaved well for our pleasure. Nancy Kloskowski brought another, quieter, bull snake and an active, three-year-old captive-born fox snake. She named the fox snake Thunder.



Colleen Schwarz holds her loudly hissing bull snake—her first native reptile at her first Show and Tell. John Archer helps out by holding the microphone. Photograph by Dick Buchholz.

Dick Buchholz had us all guessing an ID with a “jungle” corn snake. I’m not a fan of weird hybrids, but this adopted snake was impressive looking. Dick says that the information provided to him claimed the snake was 50% corn, 25% Cal king, and 25% Sinaloa milksnake. Dick uses the snake frequently when he does shows. Another show volunteer, Onnie Jonas, displayed the rescued boa constrictor that she acquired after finally convincing her parents to allow her to keep one. Molly Carlson and her mother Teresa Savino showed off a pair of rescued iguanas that were originally supposed to have a short stay with them but have become established members of the household. One had an amputated leg and missing digits and was certainly under sized, but seemed to have a nice personality and active life. The other iguana, named Don Juan, would stand on two legs to get a piece of banana, and seemed to be always looking for treats. Eliza Sullivan talked about her adopted Dumeril’s boa and its nice temperament. Native to Madagascar, she said they eat everything from bats to lemurs, but in captivity she feeds it rats. Her father Steve Sullivan brought another member of the boa family, a boa constrictor, and talked about using the different boas he has to talk about biogeography and the interesting distribution of



Jeremy Browning (L) displays his albino Burmese python with the help of Tim Jarvis. The placid animal is a star of Jeremy’s reptile shows. Photograph by Dick Buchholz.

boas around the world. He also discussed the dramatic color changes his animal goes through, though he has not discovered a pattern in the causes of change. Lawrence Huddleston showed off two very calm black-and-white tegus and a boa, noting that they all need large cages and travel to many shows. A lovely, iridescent Mexican burrowing python accompanied Frank Sladek, who explained that the snake was blue and therefore not as iridescent as normal, was native to Mexico and Central America, and was fossorial but not really a python. They’ve been documented to feed on sea turtle eggs. A corpulent Kenyan sand boa gave Joan Moore an opportunity to explore husbandry and the amount we feed our animals, making a point that this animal had only been fed twice so far this year and yet managed to maintain her weight. Ben Podolske showed a snake and a little box turtle, while his friend Christian Benz brought the only amphibian of the evening, a blue-spotted salamander found in his back yard. With that the evening came to an end.

But your society continues, at least for a while. The CHS still performs educational shows, including ReptileFest. We distribute grants. The *Bulletin* is published. We encourage kids’ interest in herpetology through Jr. Herpers. We try to rehome unwanted animals through our adoption programs. The majority of animals at this meeting were adoptions or rescues. We bring in speakers to our meetings who educate, enlighten, and sometimes enthuse. We’re on Facebook and Twitter and expanding our online presence. To continue to do these things we need you. Come to the meetings. Write for this *Bulletin*. Volunteer for a show. Help with Jr. Herpers. Next year we’ll present the Midwest Herpetological Symposium to celebrate our 50th anniversary. Get involved. You can help and we’d like to meet you.



Bemoaning the fact that his Mexican burrowing “python” (*Loxocemus bicolor*) was opaque, Frank Sladek nevertheless held a beautiful snake. Photograph by Dick Buchholz.

Herpetology 2015

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

PLOIDY-VARIABLE UNISEXUAL SALAMANDERS

C. Teltser and K. R. Greenwald [2015, *Herpetologica* 71(2): 81-87] note that populations of unisexual *Ambystoma* salamanders typically consist of ploidy-variable individuals (diploid through pentaploid) that differ in their proportional representation within the populations. These salamanders reproduce using a method that has been termed kleptogenesis: stealing genetic material from males of compatible bisexual *Ambystoma* species (e.g., Jefferson Salamanders [*A. jeffersonianum*] and Blue-spotted Salamanders [*A. laterale*]). Kleptogenesis can result in ploidy-variable embryos within an egg mass because the unisexual female might or might not incorporate the male genome. Little is known about the survivorship of individuals having different ploidy levels. Triploid individuals are most abundant, indicating that higher ploidy individuals (tetraploids and pentaploids) are either produced more rarely, or suffer higher mortality than triploids. The authors assessed the frequency of ploidy levels (determined by microsatellite analysis) across four life-history stages over 2 yr: adults, early larvae, late larvae, and metamorphosed juveniles. It was found that warmer breeding-season temperatures were correlated with an increased frequency of high-ploidy individuals being produced. In addition, there was a gradual decline in tetraploids across all stages as the larvae developed into adults. Breeding season temperature and selection against certain ploidy levels both appear to be important drivers of unisexual salamander population composition at the authors' study site.

HIGH ELEVATION WESTERN POND TURTLES

D. J. Germano and J. D. Riedle [2015, *Herpetologica* 71(2): 102-109] note that western pond turtles (*Actinemys* [*Emys*] *marmorata*) occur in habitats ranging from large rivers and reservoirs to small streams and ponds, as well as from sea level to about 2000-m elevation. This range of environments can affect population parameters such as body size, growth rates, survivorship, and reproductive output. The authors marked 321 individuals in 287 trap-days in 2007 and 2010 at a high-elevation pond on the southern flank of the Tehachapi Mountains in southern California. The population was female-biased (92 F: 78 M in 2007, 113 F:60 M in 2010), and estimated to contain 412 individuals. Growth rates were relatively high compared with other populations of *A. marmorata*. Monthly survivorship was 0.989–1.000 for adults and juveniles and λ values denoted a stable population. Clutch size averaged 6.3 eggs, and the authors found 22 instances of intra-annual double-clutching, and possibly a third clutch for one female. Population traits of turtles at this high-elevation pond differed little from turtles at lower elevation sites at the same latitude. Despite conservation threats to this species, this population is indicative that *A. marmorata* can survive well in small habitats, many of which are human-created, and this has increased the amount of habitat for the species as other natural areas have been eliminated.

SOFTSHELLS IN A PROTECTED ECOSYSTEM

E. C. Munscher et al. [2015, *Chelonian Conservation and Biology* 14(1):34-42] note that the Florida softshell turtle, *Apalone ferox* (Schneider 1783) is considered common and easily visible in many freshwater habitats throughout its range. However, very little population research has been completed on the species due to difficulties associated with capture and long-term marking. The authors have conducted a mark-recapture study of this species since 2007 as part of a long-term freshwater turtle population monitoring program at Wekiwa Springs State Park, Apopka, Florida. From 2007 to 2012 they captured 56 individual Florida softshell turtles with 101 total captures. The male:female ratio was 1:2.6 and females were larger than males. Population estimates were 92 adults and 49 juveniles with a total estimate of 141 Florida softshell turtles in the 2.67-ha study site. These data from a protected population centrally located within the species range provide a baseline for comparison to other populations.

NORTHERN PINESNAKES IN DISTURBED HABITATS

R. M. Smith et al. [2015, *Herpetologica* 71(1):19-25] note that the decline in snake populations has been attributed primarily to anthropogenic disturbances, including habitat destruction and fragmentation. The authors radio-tracked northern pinesnakes (*Pituophis m. melanoleucus*) in a military Target Zone and in the surrounding undisturbed buffer zone at the Warren Grove Gunnery Range in the New Jersey Pine Barrens, to examine differences in spatial movement patterns and behavior. There were no differences in home range size ($\bar{x} = 60.0 \pm 32.7$ ha), core activity area ($\bar{x} = 10.6 \pm 8.2$ ha), range length ($\bar{x} = 1294.8 \pm 32.7$ m), or mean distance traveled per day ($\bar{x} = 65.2 \pm 30.1$ m) across all snakes, or between sexes (male $n = 13$, female $n = 11$), or location within ($n = 13$) or outside ($n = 11$) of the Target Zone. However, there were differences between tracking years. Northern pinesnakes in 2005 and 2006 ($n = 13$) traveled greater total distance and mean distance per day and had larger home ranges compared to snakes radio-tracked in 2003 and 2004 ($n = 11$). In 2005 and 2006, snakes in the Target Zone traveled longer distances compared to snakes outside the Target Zone. Pinesnakes used both the Target Zone and undisturbed buffer zone for mating, nesting, foraging, and hibernating. Although the Target Zone was disturbed regularly, the open-canopied landscape, cover availability, and sandy soils maintained habitat for northern pinesnakes. Our data indicate that the military disturbance had little impact on the spatial ecology of northern pinesnakes; the disturbed area supported enough natural habitat features used by northern pinesnakes and was surrounded by a large tract of undisturbed landscape. These data can aid in developing mitigation and conservation strategies where the habitat of northern pinesnakes is threatened by development, in particular, across other military installations, which commonly overlap with the occurrence of northern pinesnakes.

A STABLE SEA TURTLE POPULATION

S. Derville et al. [2015, *Chelonian Conservation and Biology* 14(1):11-20] report that the island of Tromelin, about 500 km off the Malagasy east coast, is a key nesting site for the endangered green turtle, *Chelonia mydas*, in the southwestern Indian Ocean. Nesting turtles found in this isolated island have been closely monitored since the 1970s, but the most recent estimates of nesting parameters date from 1986. Using mark–recapture data, track counts, and nests monitoring data collected over the 2009/2010 nesting peak, reproductive characteristics, population size, and offspring production were updated and discussed in the light of the track survey undertaken from 1986 to 2010. Females showed a consistent reproductive behaviour compared with previous studies in terms of clutch frequency (2.75 ± 1.46) and nesting success (0.65). Nest indices such as hatching success (0.76 ± 0.25) and emergence success (0.61 ± 0.33) were also included in the range of values calculated in the 1980s. The estimated number of nesters and production in eggs and hatchlings were similar to older estimates, suggesting a relative demographic stability. For the 2009/2010 year-long nesting season, the size of the nesting population was estimated at about 1500 individuals, which produced around 480,900 eggs ($\pm 103,900$), resulting in 289,200 emerging hatchlings ($\pm 152,000$). These results are promising and support the effectiveness of conservation measures undertaken in the Iles Eparses, but further comparable monitoring is needed in the coming years to confirm the stability in Tromelin's green turtle nesting population.

TURTLE HOTSPOTS

R. A. Mittermeier et al. [2015, *Chelonian Conservation and Biology* 14(1):2-10] analyzed the taxon richness and endemism of tortoises and freshwater turtles in the world's premier biodiversity conservation priority areas and countries with greatest turtle richness. Turtle hotspots include biodiversity hotspots (BHS), high-biodiversity wilderness areas (HBWA), and additional turtle priority areas (TPA) previously identified. They present taxon richness and endemism values for the 16 turtle hotspots with highest richness and endemism. These 16 turtle hotspots together contain 262 species (83% of total), of which 149 (47%) are endemic to these areas combined, and 134 species (43%) are endemic to just a single priority area. At the terminal taxon (subspecies) level, these 16 areas harbor 342 taxa (79%), of which 210 (48%) are endemic to these combined areas, and 195 (45%) are endemic to a single priority area. These 16 BHS, HBWA, and TPA account for less than 24 million square kilometers, or 16.0% of planet Earth's land surface, with an estimated 10.4 million square kilometers of original habitat remaining, or 7.0% of the planet's land surface. Twenty-one countries are recorded to harbor 15 or more species of non-marine turtles, with the percentage of endemic species ranging from 0% to 88%. Collectively, these 21 countries are inhabited by 275 (87%) species and 352 (81%) taxa, of which 115 (37%) species and 175 (40%) taxa are endemic to just a single country. Identification of these conservation priority areas and countries should assist conservation of turtles worldwide by focusing on areas where the greatest number of species and taxa can be secured and where the authorities and institutions that exist hope to accomplish these goals.

MONITORING EASTERN SPADEFOOTS

K. J. Ryan et al. [2015, *J. Herpetology* 49(2):257-263] note that eastern spadefoots (*Scaphiopus holbrookii*) are probably one of the least-understood amphibian species in the United States. In New England, populations are localized and it is likely that some populations go undocumented because of the species' cryptic habits. The authors used passive integrated transponders (PIT tags) to monitor burrow emergence with the aid of continuously running, stationary (but portable) PIT tag readers. The activity of individual eastern spadefoots was monitored by placing circular antennae directly over burrows of PIT tag-implanted individuals. Eighteen eastern spadefoots were monitored from 1 to 84 nights in the spring, summer, and fall of 2009–2011. Results indicate that, on average, eastern spadefoots emerged on 43% of the nights that they were monitored. Nights when eastern spadefoots emerged were warmer and more humid than nonemergence nights. Eastern spadefoots were also much more likely to emerge on a given night if they had emerged the night before. These results have improved the understanding of eastern spadefoot burrow-emergence patterns in the northeast region. The findings may considerably enhance the prospect of employing nocturnal visual encounter surveys as a method for monitoring known, and detecting previously undocumented, populations of this species.

SEA SNAKE ABUNDANCE

H. B. Lillywhite et al. [2015, *J. Herpetology* 49(2):184-189] quantified the abundance of pelagic sea snakes, *Hydrophis* (= *Pelamis*) *platurus*, while following slicks that formed drift lines during 3 yr of research in the Golfo de Papagayo, Costa Rica. The number of snakes observed floating on slicks varied greatly and ranged from 0 to 1,029 per hour. The largest number observed was highly unusual in recent experience but comparable to earlier reports of sea snake aggregations in the historical literature. Snakes were more abundant on slicks with flotsam during early morning hours on clear, calm days. However, “decisions” of sea snakes to spend time floating on slicks are also influenced by other factors that are not known or are poorly understood. Neither temperature nor salinity influenced the number of snakes observed within the range of the parameters encountered. Only a single snake was observed during 13 days of searching during which there were red tide conditions with cold and turbid water disturbed almost daily by high winds. The authors also counted floating snakes at the inner basin of the Golfo Dulce in southern Costa Rica, where the population of *H. platurus* contains almost exclusively xanthic (all-yellow) individuals. These snakes are behaviorally different and are most-commonly observed while floating at night, without any strong association with slicks. Mean counts of these xanthic snakes suggest the abundance of pelagic sea snakes is essentially similar in Golfo Dulce (21.4 ± 4.4 snakes/h) and Golfo de Papagayo (19.3 ± 4.4 snakes/h, neglecting the single, unusually high count of 1,029 snakes/h).

In Memoriam: Philip A. Cochran

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Long-time CHS member Dr. Philip A. Cochran of Winona, Minnesota, died at age 59 on March 4, 2015. With Phil's death, the herpetological community lost a passionate, brilliant, yet humble ecologist who admired and cared deeply for the fauna and flora that he worked so tirelessly to understand and conserve.



Phil attended St. Mary's University in Winona, Minnesota, as an undergraduate and received his bachelor's degree in 1977. While at SMU, Phil wrote a senior thesis on the feeding habits and length-weight relationships in spiny softshell turtles (*Apalone spinifera*) from the Upper Mississippi River. Under the direction of his advisor, David R. McConville, Phil collected data on softshells from the Weaver Bottoms, Fountain City Bay backwaters, and Sam Gordy's Slough during two summers. Always meticulous in his data collection, Phil obtained stomach samples for analysis of food habits and recorded various morphological data. His work was later published in the *Journal of Herpetology* (Cochran and McConville, 1983). As was typical of Phil, he kept an eye out for herps during his undergraduate years and took detailed field notes that later turned into descriptions of the local faunal assemblages (Cochran, 1986c, 1987).

Following his years at SMU, Phil attended the University of Minnesota, where he earned his Masters of Science in 1980 with a thesis focused on seasonal aspects of daily ration and diet of largemouth bass (*Micropterus salmoides*) (Cochran and Adelman, 1982). Phil then went on to earn a Ph.D. from the University of Wisconsin in 1984, under the direction of James F. Kitchell, for his work on the foraging behavior of parasitic lampreys (Cochran, 1985, 1986a; Cochran and Kitchell, 1986, 1989). While at the UW, Phil coauthored the Best Student Paper presented at the annual meeting of the American Fisheries Society in 1982. Although his graduate studies focused on fishes, Phil continued to carefully record his amphibian and reptile observations and report on the local fauna (e.g., Cochran, 1986d, 1988).

In 1984, Phil accepted a tenure track faculty position at St. Norbert College in De Pere, Wisconsin. There he taught introductory biology, vertebrate biology, limnology, and various special topic courses. He obtained the rank of associate professor in 1991. In 1997 and 1998, he also taught summer sessions at the University of Wisconsin's Pigeon Lake Field Station in Drummond, Wisconsin.

It was at SNC that I first met Phil in the mid-1980s. He was an energetic and engaging professor. As a teaching assistant in the biology department, I had the joy of helping maintain Phil's

"wet lab," an impressive and complex room-sized aquarium system that he had helped design and install. I also had the privilege of occasionally caring for some of Phil's captive reptiles: an aging, visually impaired eastern hog-nosed snake (*Heterodon platirhinos*) that he housed in a large aquarium atop the filing cabinets in his book-filled office (Cochran, 1986b, 1994), a rather large and old snapping turtle (*Chelydra serpentina*) that lived in a children's swimming pool in the greenhouse atop the campus science building, a spectacled caiman (*Caiman crocodilus*) with a missing front foot, and a four-foot-long, adopted western fox snake (*Pantherophis vulpinus*) that had a propensity to escape. Phil displayed a deep respect for these animals and emphasized the importance of humane care in all teaching, laboratory, and field operations.

Phil returned to St. Mary's University in 2000 as a professor in the biology department, serving as that department's chair since 2004 and as acting Associate Dean of Mathematics and Sciences in 2011 and 2012. While at SMU, he continued his legacy of inspiring students, teaching environmental biology, herpetology, ichthyology, zoology, plant communities and taxonomy, earth science, and sustainable resource management. He also led the department's fisheries biology, freshwater ecology, and limnology labs.

Phil was a consummate naturalist whose interests covered a wide range of questions concerning the ecology, geographic distribution, and conservation of animals and plants. He was a prolific author, having produced hundreds of scientific notes, articles, and book chapters, including more than 30 items in the *CHS Bulletin* (see Appendix). His works address lampreys (Petromyzontidae), timber rattlesnakes (*Crotalus horridus*), mudpuppies (*Necturus maculosus*), wood turtles (*Glyptemys insculpta*), paddlefish (*Polyodon spathula*), parasitic catfish, fish lice (*Argulus japonicus*), and horsehair worms (Nematomorpha), among others. He also co-authored a book about the fishes of Wisconsin (Lyons et al., 2000). Phil conducted most of his research in Minnesota and Wisconsin, but also traveled, making observations, taking careful notes, and often reporting findings from his adventures elsewhere: Mexico (Cochran et al., 1996; Lyons et al., 1996), Panama (Cochran and Hodgson, 1997), and Peru (Cochran, 1991). In 1990, SNC recognized Phil's scholarship with its Donald B. King Distinguished Scholar award. In addition to the CHS, Phil was a member of the American Society of Ichthyologists and Herpetologists, American Fisheries Society, and Society for the Study of Amphibians and Reptiles.

Phil enjoyed taking students into the field and challenged them to *be* biologists. Field trips to local wetlands (Cochran, 2012) and the Mississippi River bluffs to learn about plants, to Weaver Dunes to catch and observe reptiles, and to various

creeks to sample fish were common. His creative lessons included an “edible final” for which students were served various fish dishes. He then asked the students to write everything they knew about each fish! Phil was a wonderful mentor who involved students in his research as much as possible, knowing that the experiences prepared them to be better learners, teachers, scholars, and citizens. He encouraged his students to publish their work, leading to numerous co-authored papers with students (e.g., Basten and Cochran, 1991; Cochran et al., 1992; Lamarre and Cochran, 1992; Cochran and Marks, 1995).

On a personal note, Phil introduced me to the complexities and intricacies of ecological relationships: parasites and their hosts, prey and their predators, parents and their offspring, and organisms and their environments. He taught me the value of careful observation, importance of maintaining good field notes, and usefulness of preserving and depositing voucher specimens. Phil also had a playful sense of humor. I recall one time when we taped a reprint of a colleague’s journal article to the bottom of a bird cage and presented it to that friend with a smile and humorous note suggesting that “that’s about all the paper was good for.” Phil’s unassuming nature made him easy to be around. Because of that, it was sometimes easy for others to forget just how brilliant he was.

First and foremost, Phil was a family man. He took his children into the field to explore nature and even coauthored a number of publications with them (e.g., Cochran and Cochran, 1999; A. Cochran et al., 2001, Kinziger et al., 2002, Cochran and Cochran, 2007). He spent the past two Minnesota summers,

often accompanied by his wife Michelle, tracking bull snakes (*Pituophis catenifer sayi*) at Weaver Dunes.

Phil had a fondness for timber rattlesnakes (*Crotalus horridus*). He served on the team that helped develop Minnesota’s *Timber Rattlesnake Recovery Plan* (Minnesota DNR, 2009) and volunteered as a rattlesnake responder. In this latter role, Phil provided property owners an alternative to killing unwanted rattlesnakes and was able to rescue many individuals of this protected species by removing them from people’s yards and relocating them out of harm’s way. As with all life forms, Phil had a deep reverence for these often misunderstood and shy creatures, and viewed this service as allowing for positive interactions and educational opportunities.

One cannot conclude an *in memoriam* piece for Phil Cochran without mentioning his love of basketball, both as player and fan. At Saint Norbert’s and Saint Mary’s, Phil regularly participated in “noon ball,” thrilling everyone with his lefty hook shot. Those who played with Phil will always have a “Phil story.”

As many students and colleagues attest, Phil was a dedicated herpetologist/ichthyologist, inspirational teacher, energetic collaborator, and dear friend. Phil showed us how to work hard and enjoy life. For all of this, he will be missed.

A memorial service for Phil was held on March 14 on the SMU campus. He is survived by his wife, Michelle; his children, Joe, Andy, Jenny, Jesse, and Gus; his grandchildren, El and Isla; his siblings, Cathy, Chris, Randy, and Cindy, and many friends and colleagues.

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UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, July 29, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Phil Goss**, president of the United States Association of Reptile Keepers (USARK) and owner of Goss Reptiles, will speak about “Us vs. T.H.E.M. (The Anti-pet Agenda).” The reptile and other pet communities are under constant attack from anti-pet groups. This talk covers the history of the largest anti-pet organizations, animal rights vs. animal welfare, fraudulent fundraising, lobbying efforts and many other aspects of the animal rights movement. The majority of Americans are still unaware of the true agenda behind these groups and it is crucial to learn what's happening so you can educate others.

At the August 26 meeting, **Alessandro Catenazzi**, assistant professor of zoology at Southern Illinois University, will speak about “Chytrid Fungus and Its Impact on South America.”

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago’s newest museum—the **Peggy Notebaert Nature Museum**. This beautiful building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

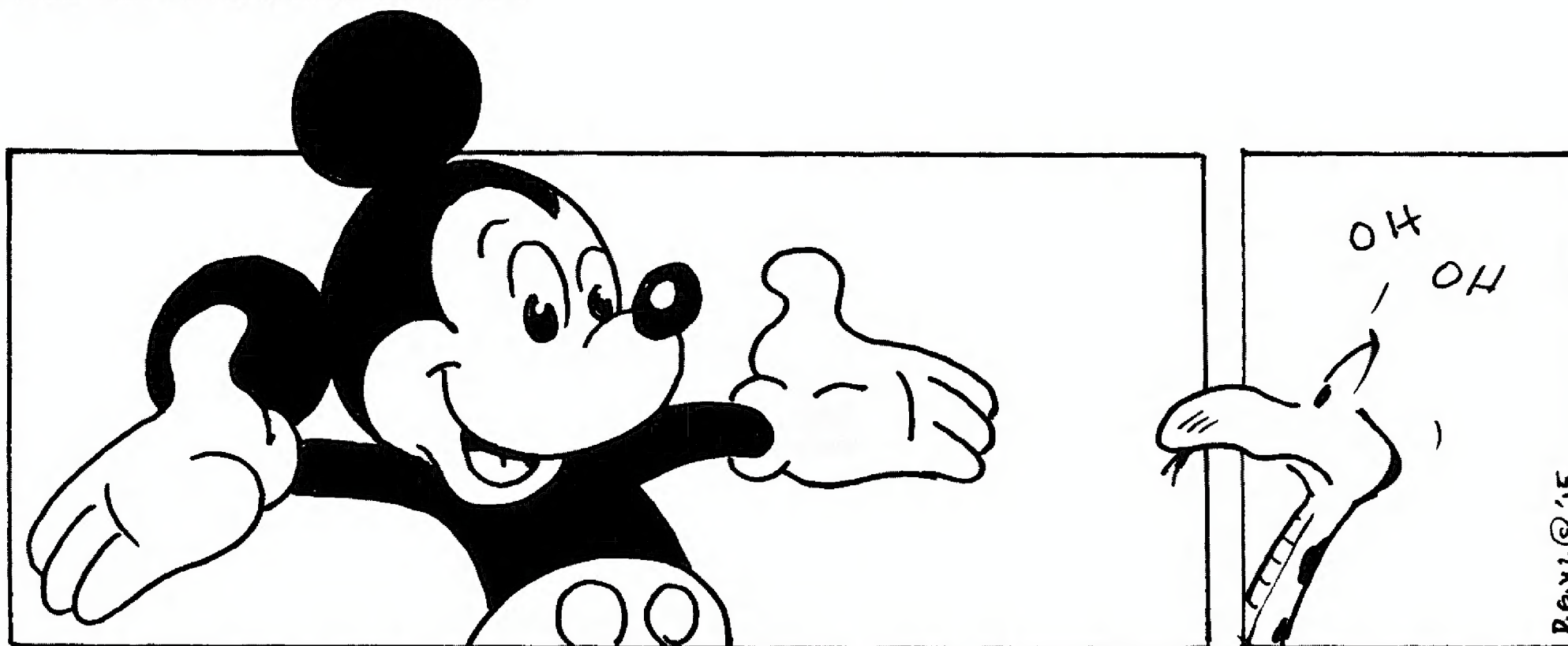
Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the next board meeting, to be held at 7:30 P.M., Friday, August 14, 2015, at the Schaumburg Township District Library, 130 S. Roselle Road, Schaumburg.

The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info visit the group’s Facebook page.

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